



500.39590X00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Y. MIYAKI, et al.
Application No.: 09/785,452
Filed: February 20, 2001
For: SEMICONDUCTOR INTEGRATED CIRCUIT DEVICE
AND METHOD OF MANUFACTURING THE SAME
Art Unit: 2827
Examiner: L. Cruz

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §§ 1.97 AND 1.98

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

June 23, 2003

Sir:

In the matter of the above-identified application, applicants are submitting herewith a copy of a communication from a foreign patent office in a counterpart foreign application and copies of the documents listed in the attached form equivalent to Form PTO-1449 for the Examiner's consideration.

This Information Disclosure Statement is being submitted after the mailing date of a first office action, however, it is being submitted within three months of the foreign report and therefore no fee is required. Further, the Applicants provide the following certification specified in 37 CFR 1.97(e):

On information and belief, I hereby certify that no item of information in the information disclosure statement filed herewith was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in § 1.56(c) more than three months prior to the filing of this information disclosure statement.

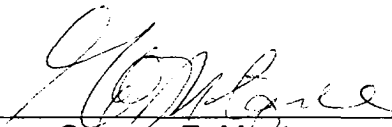
To the extent the documents listed on the attached form equivalent to Form PTO-1449 are not in the English language, the requirement of 37 CFR § 1.98(a)(3) for a concise explanation of the relevance is satisfied by an English language translation of pertinent portions of the foreign language documents.

It is respectfully requested that this information disclosure statement be considered by the Examiner.

Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, Deposit Account No. 01-2135 (500.39590X00) or credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

By 
Gregory E. Montone
Reg. No. 28,141

GEM/dlt

1300 North Seventeenth Street, Suite 1800
Arlington, Virginia 22209
Telephone: (703) 312-6600
Facsimile: (703) 312-6666

Attachment: Form PTO-1449
Search Report



PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Complete if Known		
			Application Number	09/785,452	
			Filing Date	February 20, 2001	
			First Named Inventor	Y. MIYAKI, et al.	
			Art Unit	2827	
Sheet	1	of	1	Examiner Name	L. Cruz
				Attorney Docket Number	500.39590X00

U.S. PATENT DOCUMENTS						
Examiner Initials [*]	Cite No. ¹	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)				
		US- 5,929,511		07-27-1999	Nakazawa et al	

FOREIGN PATENT DOCUMENTS						
Examiner Initials'	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
		JP 61-140160	06-27-1986	Hitachi Cable Ltd.		Abst
		JP 11-307710	11-05-1999	Matsushita Electric Ind Co Ltd		Abst

OTHER PRIOR ART—NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant

¹Applicant's unique citation designation number (optional). ²See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³Enter Office that issued the document, by the two-letter code (WIPO Standard St.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



LIGHTING UP YOUR CREATIVITY

Intellectual Property Office of Singapore

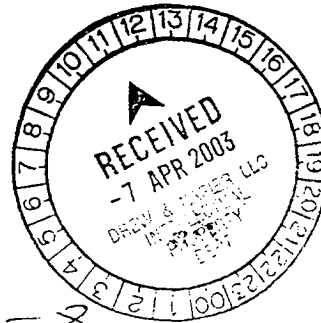
51 Bras Basah Road #04-01
Plaza By The Park Singapore 189554
Tel: (65) 63398616 Fax: (65) 63390252
<http://www.ipos.gov.sg>

RF 206

In Reply Please Quote Our Reference

Your Ref : M313KC/STN/PAT/810417A/SG
Our Ref : 200100859-8
Date :
Writer's Direct Line : 03104103

Drew & Napier
Robinson Road
P O Box 152
Singapore 900302



Asamua
~~Supp Search~~ 3/6/03

Dear Sir,

Singapore Patent Application No.: 200100859-8

Title of invention:

Applicant(s): Hitachi, Ltd.

SEARCH REPORT (Supplementary)

The Search Report for this application has been established and a copy of it is attached. ~~This application will proceed to publication in accordance with section 27 of the Patents Act (Cap. 221).~~

~~Your attention is drawn to the provisions of the Patents Act and Rules (Cap. 221 and R. 1) for action that may be taken in relation to the search report received.~~

If you have any further queries, please do not hesitate to contact the undersigned.

Thank you.

Yours faithfully,

Annie Besant d/o Surendran
for REGISTRAR OF PATENTS
SINGAPORE



Austrian Patent Office
Service and Information Sector
(TRF)

To

REGISTRY OF PATENTS
51 Bras Basah Road
#04-01 Plaza By The Park

SINGAPORE 0718

Kohlmarkt 8-10
A - 1014 VIENNA
Austria

Tel.No.: ++431/53424/0
Fax.No.: ++431/53424/520

Date of mailing:

21. März 2003

Applicant
HITACHI, LTD.

Application No.
200100859-8

Filing Date
16 February 2001 (16.02.2001)

(Earliest) Priority Date
18 February 2000 (18.02.2000)

International Patent Classification (IPC')

H01L 23/495, 23/49

Please find enclosed the

- ☒ **SEARCH REPORT**
- ☐ **EXAMINATION REPORT**
- ☐ **WRITTEN OPINION**

provided by the Austrian Patent Office as Search and Examination Authority according to the Memorandum of Understanding between the Government of Singapore and the Austrian Patent Office (MOU)

Best regards

AUSTRIAN PATENT OFFICE
Service and Information
Sector TRF

Dr. Flammer

Enclosures:

- ☒ the search report
(it is also accompanied by a copy of each prior art document cited in the report)
- ☐ the examination report
- ☐ the written opinion
- ☐ the Registry's copy of the priority application



Austrian Patent Office

Application No. 200100859-8	Applicant: HITACHI, LTD.
Filing date 16 February 2001 (16.02.2001)	(Earliest) Priority Date 18 February 2000 (18.02.2000)

GENERAL OBSERVATIONS

- ☒ This search report has been drawn on the basis of the "Request for a Search Report or Supplementary Search Report" dated 11 June 2002 and is established for the requested claims Nos.14-17.
- ☒ With regard to the abstract the text is approved as submitted by the applicant.
- ☒ The application contains neither statements disparaging any person nor expressions etc. contrary to morality or the public order.
- ☒ Unity of invention is given.



SEARCH REPORT

Application No.
200100859-8**A. CLASSIFICATION OF SUBJECT MATTER**According to the International Patent Classification (IPC⁷):

H01L 23/495, 23/49

B. FIELDS SEARCHED IPC⁷:

H01L, C23C

Electronic data base consulted during the search (name of data base and, where practicable, search terms used)
WPI, EPODOC, STN-PATDPA, DEPATISNET**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5929511 A (NAKAZAWA et al.) 27 July 1999 (27.07.99) <i>claims 1-3, abstract.</i>	14-17
	—	
A	JP 61-140160 A2 (HITACHI CABLE LTD.) 1986-06-27. Patent abstract of Japan.	14-17
	--	
A	JP 11-307710 A2 (MATSUSHITA ELECTRIC IND. CO. LTD.) 1999-11-05. Patent abstract of Japan.	14-17

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the filing date but later than the priority date claimed

"T" later document published after the filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of actual completion of the search: 21 January 2003 (21.01.2003)

AUSTRIAN PATENT OFFICE
Kohlmarkt 8-10, A-1014 VIENNA
Facsimile No. ++43 1/53424/535

Authorized Officer STEPANOVSKY M.

Telephone No. ++43 1/53424/ 135



Austrian Patent Office

Application No. 200100859-8	Applicant HITACHI, LTD.
Filing date 16 February 2001 (16.02.2001)	(Earliest) Priority Date 18 February 2000 (18.02.2000)

SEARCH REPORT

EXPLANATIONS

US 5929511 A:

The lead frame includes main body that consists of copper material on which a nickel layer, a palladium layer and a metal layer are formed in an order. The main body includes a die pad, a suspension lead, an inner lead, a tie rod, an outer lead and a frame. The main body includes a sealing member by which main body is sealed using a sealing resin. The sealing resin is guided to the sealing member using a gate runner. The metal layer is not formed at least at one part of gate runner.

JP 61-140160 A2:

To contrive the reduction of cost and the improvement of reliability by a method wherein an Ni alloy layer having one or more elements of B, P, Fe, and Co is provided on a metallic substrate, and the semiconductor element fixing part and inner lead terminals are provided with Pd or Pd-Ni alloy platings. The substrate punched out of a copper strip is provided with a Ni-Fe alloy plated layer as the base layer over the whole by electroplating. Further, Pd plated layers are partly provided thereon at the mechanical part including the semiconductor element fixing part and inner lead terminals. A Si pellet is brazed on the Pd plated layer with an Ag paste solder at the semiconductor element fixing part, and the Si pellet is wired to the inner lead terminals of the lead frame with Au fine wires. Thereafter, an IC package is constructed by sealing the whole with a resin.

JP 11-307710 A2:

The lead frame is formed by nickel or nickel alloy, copper or copper alloy and iron, or ferrous metal. The surface layer containing silver is provided in an inner lead and the surface layer containing silver and tin in outer lead .



SEARCH REPORT

Information on patent family members

Application No.

200100859-8

This annex lists the patent family members relating to the patent documents cited in the search report.
The members are as contained in the EPIDOS INPADOC file.
The Office is in no way liable for these particulars which are merely given for the purpose of information

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US A 5929511	27-07-1999	JP A2 10084066	31-03-1998
		JP B2 3288263	04-06-2002
JP A2 61140160	27-06-1986	none	
JP A2 11307710	05-11-1999	US A 6087714	11-07-2000
		JP A2 00164782	16-06-2000